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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/769,688	01/25/2001	Takashi Mochizuki	P/647-136	5364

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EXAMINER

KUMAR, PANKAJ

ART UNIT	PAPER NUMBER
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2631

DATE MAILED: 06/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/769,688

Applicant(s)

MOCHIZUKI, TAKASHI

Examiner

Pankaj Kumar

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 January 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 5-10 is/are rejected.
- 7) ☒ Claim(s) 3 and 4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1 and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Bradley
USPN 6262637.

3. As per claim 1, Bradley teaches a transmission apparatus comprising: filter means for reducing leakage power outside a transmission signal band (Bradley fig. 2: “transmit band”), said filter means having a first attenuation amount (Bradley fig. 2: 36) more than a predetermined amount (Bradley fig. 2: top line of “transmit band”) or a second attenuation amount not more than the predetermined amount selectively set in a range higher than a transmission signal band; modulation means for modulating the transmission signal output from said filter means (Bradley col. 1 lines 18-19: “modulated transmit signal generated by the transmitter”; col. 4 lines 20-25); and control means for setting one of the first and second attenuation amounts in said filter means in accordance with a use situation of a band adjacent to the transmission signal band (Bradley col. 1 lines 55-60: “In the example shown, band-pass filters are configured such that the high-frequency stop band of the band-pass filter 30 overlaps the pass-band of the band-pass filter 32 and the low-frequency stop band of the band-pass filter 32 overlaps the pass-band of the band-pass filter 30.”).

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4. As per claim 7, Bradley teaches an apparatus according to claim 1, wherein said filter means, modulation means, and control means are arranged in one of a mobile station and a base station of a mobile communication system (Bradley col. 1 line 14: "cellular or cordless telephone"; col. 6 lines 8-9: "... PCS device, cellular telephone or other transmit/receive apparatus ...").

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2, 5-6, 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bradley in view of Katayama USPN 6356746

7. As per claim 2, Bradley teaches an apparatus according to claim 1, wherein said filter means comprises a first low-pass filter having the first attenuation amount (Bradley fig. 2: 36), and a second low-pass filter having the second attenuation amount (Bradley fig. 2: 38), and said control means selects one of said first and second low-pass filters in accordance with the use situation of the band adjacent to the transmission signal band. This is not in Bradley. Katayama 6356746 teaches this with figure 9: 18, 19, 42, 70, 74, 76, 78, 75, 77, 79, fig. 10: 18, 19, 42, 85, 87, 89 and also col. 5 lines 45-55 paragraph 29: "an electric field strength holding means for holding signal levels detected by the electric field strength detecting means under a condition that the I low-pass filter and the Q low-pass filter are set to have at least two different cut-off

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frequencies; an adjacent wave detecting means for detecting a signal level of the adjacent wave based on an output of the electric field strength holding means; and a baseband filter controlling means for variably controlling cut-off frequencies of the I low-pass filter and the Q low-pass filter according to an output signal of the adjacent wave detecting means.” It would have been obvious to one skilled in the art at the time of the invention to modify Bradley with Katayama. One would have been motivated to do so since Katayama teaches to reduce the influence of the adjacent waves in col. 6 lines 59-60.

8. As per claim 5, Bradley in view of Katayama teaches an apparatus according to claim 2, wherein said apparatus further comprises switch means for selecting one of said first and second low-pass filters (Katayama fig. 9: 74, 76, 78, 75, 77, 79, 42; fig. 10: 85, 87, 89, 42), and said control means controls said switch means to extract one of outputs from said first and second low-pass filters as a transmission signal (Katayama fig. 9: 18, 19, output of 73; fig. 10: 18, 19, output of 83).

9. As per claim 6, Bradley in view of Katayama teaches an apparatus according to claim 2, wherein when said first low-pass filter is selected, power supply to said second low-pass filter is stopped, and when said second low-pass filter is selected, power supply to said first low-pass filter is stopped. This is not in Bradley or Katayama. It is common knowledge to rearrange parts of an invention and in this, to rearrange from parallel filters to series filters. It would have been obvious to one skilled in the art at the time of the invention to modify Katayama's fig. 9 such that the filters with their switches are rearranged to be in series in order to supply power to the selected filters and not to the nonselected filters. One would have been motivated to do so in order for efficiency to conserve power.

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10. As per claim 8, Bradley teaches an apparatus according to claim 7. Bradley does not teach the remainder of claim 8. Katayama teaches the remainder of claim 8 wherein said apparatus further comprises extraction means for extracting information related to the use situation of the band adjacent to the transmission signal band from a reception signal (Katayama col. 3 lines 25-26: "in response to a signal level of the adjacent wave"), and said control means performs operation of setting the first and second attenuation amounts on the basis of an output from said extraction means (Katayama col. 5 lines 44-55: "an electric field strength holding means for holding signal levels detected by the electric field strength detecting means under a condition that the I low-pass filter and the Q low-pass filter are set to have at least two different cut-off frequencies; an adjacent wave detecting means for detecting a signal level of the adjacent wave based on an output of the electric field strength holding means; and a baseband filter controlling means for variably controlling cut-off frequencies of the I low-pass filter and the Q low-pass filter according to an output signal of the adjacent wave detecting means."). It would have been obvious to one skilled in the art at the time of the invention to modify Bradley with Katayama. One would have been motivated to do so since Katayama teaches to reduce the influence of the adjacent waves in col. 6 lines 59-60.

11. As per claim 9, Bradley teaches an apparatus according to claim 7. Bradley does not teach the remainder of claim 9. Katayama teaches the remainder of claim 9 wherein said apparatus further comprises monitor means for monitoring the use situation of the band adjacent to the transmission signal band from a reception signal, and said control means performs operation of setting the first and second attenuation amounts on the basis of an output from said monitor means (Katayama col. 5 lines 44-55: "an electric field strength holding means for

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holding signal levels detected by the electric field strength detecting means under a condition that the I low-pass filter and the Q low-pass filter are set to have at least two different cut-off frequencies; an adjacent wave detecting means for detecting a signal level of the adjacent wave based on an output of the electric field strength holding means; and a baseband filter controlling means for variably controlling cut-off frequencies of the I low-pass filter and the Q low-pass filter according to an output signal of the adjacent wave detecting means.”). It would have been obvious to one skilled in the art at the time of the invention to modify Bradley with Katayama. One would have been motivated to do so since Katayama teaches to reduce the influence of the adjacent waves in col. 6 lines 59-60.

12. As per claim 10, Bradley teaches an apparatus according to claim 7, wherein when the band adjacent to the transmission signal band is used in an adjacent/superposing system, said control means sets the first attenuation amount in said filter means (Bradley paragraph 9: “The bandwidth of the portions of the spectrum assigned to the transmit signal and the receive signal are about 3% of the carrier frequency, i.e., 60 MHz. This means that the band-pass filters 30 and 32 are required to have an extremely sharp roll-off.”), and when the band adjacent to the transmission signal band is not used in the adjacent/superposing system, said control means sets the second attenuation amount in said filter means (This is not in Bradley. Katayana teaches this with the following: paragraph 26: “In practice, in the event that the adjacent wave has been detected in the setting based on the above-mentioned advanced radio paging system standard (RCR STD-43), if the low-frequency cut-off frequencies of the first I low-pass filter 9a and the first Q low-pass filter 10a are narrowed from 10 KHz to 8 KHz, the influence of the adjacent wave can be reduced ... In the event that the adjacent wave has not been detected, if the low-

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frequency cut-off frequencies of the first I low-pass filter 9a and the first Q low-pass filter 10a are widened from 8 KHz to 10 KHz”; paragraph 47 “In contrast, if it has been decided that the adjacent waves are not contained, the baseband filter controlling means 18 outputs the filter controlling signal 19 based on the output signal from the adjacent wave detecting means 17 to raise the cut-off frequencies of the first I low-pass filter 9a and the first Q low-pass filter 10a” It would have been obvious to one skilled in the art at the time of the invention to modify to modify Bradley with Katayama. One would have been motivated to do so in order to achieve the frequency offset tolerance advantage pointed out in Katayama in paragraph 47 : “if it has been decided that the adjacent waves are not contained, the baseband filter controlling means 18 outputs the filter controlling signal 19 based on the output signal from the adjacent wave detecting means 17 to raise the cut-off frequencies of the first I low-pass filter 9a and the first Q low-pass filter 10a, whereby tolerance for the frequency offset of the oscillation frequency of the first local oscillator 4 from the carrier frequency of the modulated signal 3 to be received can be improved.”).

Allowable Subject Matter

13. Claims 3, 4 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pankaj Kumar whose telephone number is (703) 305-0194. The examiner can normally be reached on Mon, Tues, Wed and Thurs after 8AM to after 6:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad H. Ghayour can be reached on (703) 306-3034. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PK

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PRIMARY EXAMINER